regimens induced vigorous antibody responses that persisted through 12 weeks after the last vaccine dose. Modest lympho-proliferative and ELISPOT (interferon-γ and interleukin-5) responses, particularly to TRAP, approximated adult comparators. RTS,S+TRAP/AS02A was safe and well tolerated. Vigorous antibody production and modest, selective cell-mediated immune responses suggest that RTS,S+TRAP/AS02A may be immunogenic in human infants.

Am J Trop Med Hyg. 2004; 70(5): 499-509.

VARIATION OF CIRCUMSPOROZOITE 26 AND 29 GENOTYPES OF *PLASMODIUM FALCIPARUM* INFECTING PATIENTS AND ASSOCIATION WITH HLA-DQA ALLOTYPES IN WESTERN THAILAND

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We evaluated the proportion of variants of circumsporozoite protein (cp) gene 26 and cp29 antigenic epitopes of *Plasmodium falciparum* infecting patients among 3 provinces in western Thailand, in addition to published variants from Gambia. The proportion of patients coinfected with cp26 and cp29 strains was significantly higher in patients reporting to malaria clinics in Tak than in Kanchanaburi and Ratchaburi and higher in Kanchanaburi than in Ratchaburi. In western Thailand, coinfection with cp26 and cp29 appears to increase with increasing latitude. There were also significant differences in proportion of these variants among Thai provinces and Gambia. An association of patient human leukocyte antigen (HLA) class II genotype was associated with *P. falciparum* strains. There were significant associations among the HLA-DQA alleles in patients, the province of origin, and cp variants of *P. falciparum*.

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ANTIFOLATE WR99210 EFFECTIVE AGAINST *PLASMODIUM VIVAX* ISOLATES GENETICALLY NOT SENSITIVE TO PYRIMETHAMINE

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Vivax malaria has attracted a high attention in the last decade due to the incidence of the chloroquine resistant strain of *P. vivax* reported from several endemic areas. The objectives of this study were to assess and compare in vitro drug sensitivity of *P. vivax* to chloroquine and two antifolates *ie* pyrimethamine and WR99210 using the modified WHO microtest. In addition, *P. vivax* dihydrofolate reductase (*dhfr*) genes among different isolates were also amplified and analyzed by restriction fragment length polymorphism (RFLP) technique and DNA sequencing in order to clarify their polymorphisms and correlation to antifolate responses. The EC_{50} values of chloroquine ranged between 50-191.98 nM (Mean ± SD = 109.09 ± 40.57,n = 44), while the range of pyrimethamine is 313.95-1,825.20 nM (Mean ± SD = 1,065.93 ± 396.37, n = 44)